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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,899	08/10/2006	Ney Osvaldo Silva Filho	033794/307767	7174

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EXAMINER	
MI, QIUWEN	

ART UNIT	PAPER NUMBER
1655	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,899	FILHO ET AL.	
	Examiner	Art Unit	
	Qiuwen Mi	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6,8-16 and 19-32* is/are pending in the application.

4a) Of the above claim(s) *11-14 and 19-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6,8-10,15,16 and 23-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's amendment, and the 1.132 declaration of Dr. Irineu Tadeu Velasco in the reply filed on 9/24/07 are acknowledged. Since the 1.132 declaration of Dr. Irineu Tadeu Velasco showed that 19 rabbits were treated with 100 mg/kg of *Trichilia catigua* for 15 days, the animals were then killed, the heart was electrically stimulated, and no ventricular fibrillation could be induced in the treatment group, thus the declaration is found persuasive. Thereofore, the 112, 1st and 101 rejections regarding "prevention" are withdrawn.

Claims Pending

Claims 23-32 are newly submitted, which are drawn to the elected Group I. Claims 3-5, 7, 17, and 18 are cancelled. Claims 1, 2, 6, 8-16, and 19-32 are pending. Claims 11-14, and 19-22 are withdrawn as they are directed toward a non-elected invention groups or species. Claims 1, 2, 6, 8-10, 15, 16, and 23-32 are examined on the merits.

Claim Rejections –35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 8, 23, and 24 are rejected under 35 USC § 102 (a) as being anticipated by Batista et al (WO 200296443).

This rejection is maintained for reasons of record set forth in the Office Action mailed out on 3/29/2007, repeated below, slightly altered to take into consideration Applicant's amendment filed on 9/24/07. Applicants' arguments filed have been fully considered but they are not deemed to be persuasive.

Batista et al teach a method for treating acute myocardial infarction with a composition comprising *Trichilia catigua, Paullinia cupana,* and *Zingiber officinale* (see Abstract).

Since claims 1, 2, 8, 23, and 24 recite "prevent" ventricular fibrillation, it is not necessary that the one has ventricular fibrillation condition, and the claims read on any one who is being administered the claimed plant extract.

Therefore, the reference is deemed to anticipate the instant claim above.

With regard the 102 rejection under Batista et al, Applicant argues that Batista et al contains no reference whatsoever to ventricular fibrillation, and the Examiner is basing the rejection on the premise that treatment of patients with acute myocardial infarction inherently anticipates the prevention of ventricular fibrillation, the fact that a certain result may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic (page 7, last paragraph). Thus Examiner has failed to provide a solid basis for the contention that prevention of ventricular fibrillation necessarily flows from treatment of myocardial infarction (page 8, 1st paragraph).

Applicant's argument is not found persuasive. Since the claims rejected under 102 recite "prevention" of ventricular fibrillation, it does not require that the patient is suffered with ventricular fibrillation, and the claims are broad enough to read on anyone who is being administered with the claimed *Trichilia spp* extracts, thus the 102 rejection stands.

Claim Rejections –35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 6, 8-10, 23, 24, and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Andre et al (WO 200296441) and Sander et al (US 6,335,039).

This rejection is maintained for reasons of record set forth in the Office Action mailed out on 3/29/2007, repeated below, slightly altered to take into consideration Applicant's amendment filed on 9/24/07. Applicants' arguments filed have been fully considered but they are not deemed to be persuasive.

Andre et al teach a method of using 5-50 % m/m or 0.5-5.5% m/v *Trichilia catigua,* 2-30% m/m or 0.1-7.5% m/v *Paullinia cupana,* 0.5-3% m/m or 0.1-2% m/v *Zingiber officinale* (page 4) and a carrier (excipient) as vasodilators (page 2, lines 10-15). Andre et al also teach that the invention can be administered orally in the form of tablets (solid form), solutions (liquid form) etc (page 5, 2nd paragraph).

Andre et al do not teach the incorporation of *Croton moritibensis* into the composition.

Sander et al teach a method for producing vasodilation using *Trichilia catigua,* guarana (the same as *Paullinia cupana* , see the instant specification, page 2, 2nd paragraph),

Muirapuama (the same as *Croton moritibensis*, see the instant application, page 2, lines 10-15) (col 4, lines 15-45).

"It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose ...[T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.).

In the instant case, all of the above-listed ingredients were known as vasodilators. Thus, one of ordinary skill in the art would have had a reasonable expectation that the combination of these compounds would have been additively beneficial in vasodilation.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the instant ingredients for their known benefit since each is well known in the art as vasodilators. This rejection is based on the well established proposition of patent law that no invention resides in combining old ingredients of known properties where the results obtained thereby are no more than the additive effect of the ingredients, In re Sussman, 1943 C.D. 518.

It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re AIler, 220 F2d 454,456,105 USPQ 233; 235 (CCPA 1955). see MPEP § 2144.05 part II A. Although the prior art did not specifically disclose the amounts of each constituent as in claims, it would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made

to determine all operable and optimal concentrations of components because concentration is an art-recognized result-effective variable which would have been routinely determined and optimized in the pharmaceutical art.

Accordingly, the instant claims, in the range of proportions where no unexpected results are observed, would have been obvious to one of ordinary skill having the above cited references before him.

Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to combine the inventions Andre et al and Sander et al since both of them teach compositions for producing vasodilating effect individually in the art. Since both of the compositions yielded beneficial results in pharmaceutical industry, one of ordinary skill in the art would have been motivated to make the modifications. The result-effective adjustment in conventional working parameters (e.g., determining an appropriate amount of the components within the composition) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

With regard to the 103 rejection under Andre et al and Sander et al, Applicant argues that neither Andre et al nor Sander et al teach or suggest treatment or prevention of ventricular fibrillation, a *prima facie* case of obviousness has not been established (page 8, 3rd and 4th paragraphs). Applicant's arguments have been fully considered but they are not persuasive. As

indicated above, since the claims rejected under this 103 recite "prevention" of ventricular fibrillation, it does not require that the patient is suffered with ventricular fibrillation, and the claims are broad enough to read on anyone who is being administered with the claimed extracts, thus the 103 rejection stands.

Claims 1, 2, 6, 8-10, 15, 16, and 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andre et al (WO 200296441), in view of Sander et al (US 6,335,039), further in view of Kowey et al (Cardiovascular Research, 17: 106-112, 1982).

This rejection is maintained for reasons of record set forth in the Office Action mailed out on 3/29/2007, repeated below, slightly altered to take into consideration Applicant's amendment filed on 9/24/07. Applicants' arguments filed have been fully considered but they are not deemed to be persuasive.

Andre et al teach a method of using 5-50 % m/m or 0.5-5.5% m/v *Trichilia catigua,* 2-30% m/m or 0.1-7.5% m/v *Paullinia cupana,* 0.5-3% m/m or 0.1-2% m/v *Zingiber officinale* (page 4) and a carrier (excipient) as vasodilators (page 2, lines 10-15). Andre et al also teach that the invention can be administered orally in the form of tablets (solid form), solutions (liquid form) etc (page 5, 2nd paragraph).

Andre et al do not teach treating ventricular fibrillation explicitly, neither do they teach the incorporation of *Croton moritibensis* into the composition.

Sander et al teach a method for producing vasodilation using 2-15% muirapuama (the same as *Croton moritibensis*, see the instant application, page 2, lines 10-15), *Trichilia catigua,*

and guarana (the same as *Paullinia cupana*, see the instant specification, page 2, 2nd paragraph) (col 4, lines 15-45).

"It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose ...[T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980) (citations omitted) (Claims to a process of preparing a spray-dried detergent by mixing together two conventional spray-dried detergents were held to be prima facie obvious.).

In the instant case, all of the above-listed ingredients were known as vasodilators. Thus, one of ordinary skill in the art would have had a reasonable expectation that the combination of these compounds would have been additively beneficial in vasodilation.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the instant ingredients for their known benefit since each is well known in the art as vasodilators. This rejection is based on the well established proposition of patent law that no invention resides in combining old ingredients of known properties where the results obtained thereby are no more than the additive effect of the ingredients, In re Sussman, 1943 C.D. 518.

It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re AIler, 220 F2d 454,456,105 USPQ 233; 235 (CCPA 1955). see MPEP § 2144.05 part II A. Although the prior art did not specifically disclose the amounts of each constituent as in claims, it would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made

to determine all operable and optimal concentrations of components because concentration is an art-recognized result-effective variable which would have been routinely determined and optimized in the pharmaceutical art.

Accordingly, the instant claims, in the range of proportions where no unexpected results are observed, would have been obvious to one of ordinary skill having the above cited references before him.

Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art at the time the invention was made to use *Croton moritibensis* in Sander together with *Trichilia catigua, Paullinia cupana,* and *Zingiber officinale* in Andre et al in inducing vasodilation. Since both Andre et al and Sander yielded beneficial results in inducing vasodialtion in pharmaceutical industry, one of ordinary skill in the art would have been motivated to make the modifications.

As evidenced by Kowey et al teach that vulnerability of ventricular fibrillation is affected by changes in systemic arterial blood pressure. Small doses of a vasodilator drug can abolish the enhanced ventricular vulnerability induced by norepinephrine, and can augment ventricular electrical stability (see Abstract).

Since Kowey et al teach that ventricular fibrillation could be abolished by pretreatment of vasodilators (see Abstract), the combination of *Croton moritibensis* in Sander together with *Trichilia catigua, Paullinia cupana,* and *Zingiber officinale* in Andre et al would induce vasodialtion, which could further abolish ventricular fibrillation. The dosages of *Trichilia catigua, Paullinia cupana, Zingiber officinale* described in Andre et al (page 4, lines 5 to the bottom of the page) and the dosage of *Croton moritibensis* in Sander meet claims 4 and 5. The result-effective adjustment in conventional working parameters (e.g., determining an appropriate

amount of the components within the composition) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan, which dependent upon the condition of the patients.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

With regard to the 103 rejection under Andre et al, Sander et al, and Kowey et al, Applicant argues that the term vasodilator encompasses a wide range of structurally distinct compounds, and one of the skilled in the art would not have a reasonable expectation that all vasodilators would be successfully in the Kowey et al methods, thus a prima facie case of obviousness has not been established (page 9, 3rd paragraph). Applicant's argument is not persuasive. It is not necessary to prove all the vasodilators could treat ventricular fibrillation. Andre et al, Sander et al teach the four claimed plant extracts, choosing from a finite number of predictable solutions would have been obvious because a person of ordinary skill has good reason to pursue the known options with his or her technical grasps. If this leads to the anticipated success, it is likely the product not of innovation, but of ordinary skill and common sense.

Conclusion

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qiuwen Mi whose telephone number is 571-272-5984. The examiner can normally be reached on 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Qiuwen Mi

TERRY MCKELVEY, PH.D.
SUPERVISORY PATENT EXAMINER